[0019] **FIG. 3***c* illustrates a cross-sectional view of the user input device in **FIG. 3***a* with additional contact applied;

[0020] **FIG. 4***a* illustrates the selection of an item illustrated on a display using a user input device consistent with the present invention;

[0021] **FIG. 4***b* illustrates a response to the selection of an item illustrated on a display using a user input device consistent with the present invention;

[0022] **FIG. 5***a* illustrates an implementation of an active edge user interface on a wireless communications device for responding to a call consistent with the present invention;

[0023] **FIG. 5***b* illustrates an implementation of an active edge user interface on the wireless communications device of **FIG. 5***a* for forwarding a call;

[0024] **FIG. 5***c* illustrates an implementation of an active edge user interface on the wireless communications device of **FIG. 5***a* for locating information in memory;

[0025] **FIG. 5***d* illustrates an implementation of an active edge user interface on the wireless communications device of **FIG. 5***a* for selecting the name of a person; and

[0026] **FIG. 6** illustrates a flowchart of a method for implementing an active edge user interface consistent with the present invention.

DETAILED DESCRIPTION OF THE DRAWINGS

[0027] Systems and methods consistent with the present invention use an active edge user interface positioned near the edge of a display that allows a user to interact with a host device. The active edge user interface includes a flexible input device that extends along at least one edge of a display and responds to touch and pressure to implement one or more functions viewable on the display. This design supports key travel, programmability, ease-of-use, and adaptability to a variety of applications and technologies.

[0028] **FIG. 1** illustrates an active edge user interface **100** consistent with the present invention. Active edge user interface **100** includes a display **110**, active touch input device **120**, processor **130**, and memory **140**. These components represent the basic infrastructure of active edge user interface **100**. One skilled in the art will appreciate that active edge interface **100** may include additional components depending on the host device in which it is used. For example, active edge user interface **100** can be used in a wristwatch, which may require altering the shape and size of display **110** and input device **120**. In addition, active edge user interface **100** can be installed in a desktop computer which may include additional processors and memory. Active edge user interface **100** is designed as a universal interface that can operate in any graphical user interface environment.

[0029] Display **110** is any commercially available display that is capable of displaying textual and graphical images. Preferably, display **110** is a liquid crystal diode (LCD) display, however, the type of display used with active edge user interface **100** can depend on the user environment. For example, active edge user interface **100** may be used in a desktop computer system. In this instance, images can be generated on display **110** using a cathode ray tube. Alternatively, active edge user interface **100** may be used in a wireless communication device, such as a cellular phone, in which case display **110** is an LCD display. Although illustrated in **FIG. 1** with a square screen, display **110** can be any geometrical shape.

[0030] Active edge input device **120** is a user interface device positioned adjacent display **110**. Active edge input device **120** may actually touch display **110** or lay a predetermined distance away from an edge of display **110**. The shape of active edge input device **120** may vary depending on the user environment. For example, active edge input device **120** may be shaped in a manner that visibly distinguishes between a highly used area of the device and a lesser used area of the device (e.g., the highly used area is wider than the lesser used area).

[0031] As illustrated in **FIG. 1**, active edge input device **120** extends around the perimeter of display **110**. Nevertheless, active edge input device **120** may be configured to extend only along one, two, or three sides of display **110**. If display **110** has a round geometrical shape, active edge input device **120** may form a complete circle around the display or only extend around a portion of the display. The position of active edge input device **120** relative to display **110** is important to provide an ergonomically correct, user-friendly interface device. The structure of and method for using active edge input device **120** with display **110** is described in detail with respect to FIGS. **2-6**, respectively.

[0032] Processor **130** is preferably a high-speed processor, such as an Intel Pentium® processor, capable of processing simple and complex graphic applications. Processor **130** communicates with display **110** and controls active edge user interface **100**. Although illustrated as an external unit, processor **130** can be integrated into display **110** or located in a peripheral device.

[0033] Memory **140** is a random access memory (RAM) that communicates with processor **130** to store and retrieve data and software. Preferably, memory **140** facilitates high-speed access to enhance the storage and retrieval process. As illustrated in **FIG. 1**, memory **140** includes data storage **150** and user interface software **160**. One skilled in the art will appreciate that memory **140** can store additional data and software not described herein. For example, in a wireless communications environment, memory **140** may include communications software to support the transfer of voice signals to and from a cell site.

[0034] Data storage **150** is an area of memory **140** that stores data. For example, when utilizing active edge input device **120** in a wireless communications device, data storage **150** may include a listing of telephone numbers or call information (e.g., number of calls received within a specified time period). Of course, the type of data resident in data storage **150** may change based on the user environment.

[0035] User interface software **160** is a software program resident in memory **140** that implements methods of active edge user interface **100** in accordance with the present invention. User interface software **160** is executed by processor **130** to respond to user inputs into active edge input device **120**. User interface software **160** interprets the user inputs and implements an appropriate response. For example, if a user wishes to call a friend, the user selects the friend's name from a telephone listing displayed on the screen by pressing on active edge input device **120** in a